

ABSTRACT OF THE DISCLOSURE

The present inventors have discovered that the solution rheology of
5 cellulose ethers prepared from cellulose pulp is altered by mercerizing and recovering
cellulose pulp before preparing the cellulose ethers. For example, the solution viscosity
of carboxymethyl cellulose (CMC) produced from mercerized and recovered cellulose
pulp is significantly greater than that produced from non-mercerized cellulose pulp. The
present invention provides a method of preparing cellulose ethers comprising the steps of
10 (a) obtaining mercerized and recovered cellulose pulp, and (b) converting the mercerized
and recovered cellulose pulp into the cellulose ethers. The mercerized cellulose pulp is
typically substantially free of cellulose III. Mercerized cellulose pulp prepared by this
method has a greater percentage of crystalline cellulose II and a smaller crystalline area
than that of non-mercerized cellulose pulp. The present invention also provides a method
15 of preparing a cellulose floc comprising the steps of (a) obtaining mercerized and
recovered cellulose pulp, and (b) treating the mercerized pulp to form the cellulose floc.
Alternatively, the method comprises mercerizing and recovering a cellulose floc.
Cellulose floc prepared by this method have a greater bulk density than cellulose floc
prepared from similar non-mercerized cellulose pulp. Furthermore, the bulk density gain
20 is greater than that expected from the coarseness (weight per unit of fiber length) gain
from preparing a cellulose floc.